<u>What is claimed is:</u>

1. An isolated nucleic acid comprising a nucleotide sequence encoding a peptide having an activity of a house dust mite allergen, <u>Der p</u> VII.

2. An isolated nucleic acid of claim 1, which is a cDNA sequence.

3. An isolated nucleic acid of claim 2, wherein the cDNA comprises a nucleotide sequence shown in Figure 3A and 3B (SEQ ID NO: 1).

4. An isolated nucleic acid of claim 2, wherein the cDNA comprises the coding region of a nucleotide sequence shown in Figure 3A and 3B (SEQ ID NO: 1).

5. An isolated nucleic acid of claim 1, wherein the peptide comprises an amino acid sequence shown in Figure 3A and 3B (SEQ ID NO: 2).

6. An isolated nucleic acid of claim 5, wherein the peptide comprises amino acid residues 1 through 198 of the sequence shown in Figure 3A and 3B (SEQ ID NO: 2).

7. An isolated nucleic acid of claim 1, wherein the peptide is at least 50% homologous with a sequence comprising an amino acid sequence shown in Figure 3A and 3B (SEQ ID NO: 2).

8. An isolated nucleic acid of claim 1, wherein the peptide is encoded by a nucleic acid which hybridizes under high or low stringency conditions to a nucleic acid which encodes a peptide comprising an amino acid sequence shown in Figure 3A and 3B (SEQ ID NO: 2).

9. An isolated nucleic acid of claim 1, wherein the peptide is at least about 10-20 amino acids in length.

10. An isolated nucleic acid of claim 1, wherein the peptide is at least about 10-16 amino acids in length.

11. An isolated nucleic acid comprising a nucleotide sequence encoding a peptide having an activity of a house dust mite allergen, <u>Der f</u> VII.

12. An isolated nucleic acid of claim 11, which is a cDNA sequence.

13. An isolated nucleic acid of claim 12, wherein the cDNA comprises a nucleotide sequence shown in Figure 6A and 6B (SEQ ID NO: 6).

14. An isolated nucleic acid of claim 13, wherein the cDNA comprises the coding region of a nucleotide sequence shown in Figure 6A and 6B (SEQ ID NO: 6).

15. An isolated nucleic acid of claim 11, wherein the peptide comprises an amino acid sequence shown in Figure 6A and 6B (SEQ ID NO: 7).

16. An isolated nucleic acid of claim 11, wherein the peptide is at least 50% homologous with a sequence comprising an amino acid sequence shown in Figure 6A and 6B (SEQ ID NO: 7).

17. An isolated nucleic acid of claim 11, wherein the peptide is encoded by a nucleic acid which hybridizes under high or low stringency conditions to a nucleic acid which encodes a peptide comprising an amino acid sequence shown in Figure 6A and 6B (SEQ ID NO: 7).

18. An isolated nucleic acid of claim 11, wherein the peptide is at least about 10-20 amino acids in length.

19. An isolated nucleic acid of claim 11, wherein the peptide is at least about 10-16 amino acids in length.

20. A recombinant expression vector comprising the nucleic acid of claim 1.

21. A recombinant expression vector of claim 20, wherein the nucleic acid is cDNA.

22. A recombinant expression vector of claim 21, wherein the cDNA comprises a nucleotide sequence shown in Figure 3A and 3B (SEQ ID NO: 1).

23. A recombinant expression vector comprising the nucleic acid of claim 11.

24. A recombinant expression vector of claim 23, wherein the nucleic acid is cDNA.

25. A recombinant expression vector of claim 24, wherein the cDNA comprises a nucleotide sequence shown in Figure 6A and 6B (SEQ ID NO: 7).

26. A host cell transfected with the recombinant expression vector of claim 20 capable of directing the expression of a peptide having an activity of Der p VII.

27. A host cell of claim 26 which is a eukaryotic cell.

28. A host cell transfected with the recombinant expression vector of claim 22 capable of directing the expression of a peptide having an activity of Der p VII.

29. A host cell of claim 28 which is a eukaryotic cell.

30. A host cell transfected with the recombinant expression vector of claim 23 capable of directing the expression of a peptide having an activity of Der f VII.

31. A host cell of claim 30 which is a eukaryotic cell.

32. A host cell transfected with the recombinant expression vector of claim 25 capable of directing the expression of a peptide having an activity of Der f VII.

33. A host cell of claim 32 which is a eukaryotic cell.

34. A method of producing a peptide having an activity of Der p VII, comprising culturing a host cell of claim 26 in medium to express the peptide and isolating the peptide from the culture.

35. A method of producing a peptide having an activity of Der f VII, comprising culturing a host cell of claim 30 in medium to express the peptide and isolating the peptide from the culture.

36. An isolated peptide having an activity of a house dust mite allergen, Der p VII, produced by recombinant expression of a nucleic acid of claim 1.

37. An isolated peptide having an activity of a house dust mite allergen, Der p VII, produced by recombinant expression of a nucleic acid of claim 3.

38. An isolated peptide having an activity of a house dust mite allergen, Der p VII, produced by chemical synthesis.

39. An isolated peptide of claim 38 which is at least about 10-20 amino acids in length.

40. An isolated peptide of claim 39 which is at least about 10-16 amino acids in length.

41. An isolated peptide having an activity of a house dust mite allergen, Der f VII, produced by recombinant expression of a nucleic acid of claim 11.

42. An isolated peptide having an activity of a house dust mite allergen, Der f VII, produced by recombinant expression of a nucleic acid of claim 13.

43. An isolated peptide having an activity of a house dust mite allergen, Der f VII, produced by chemical synthesis.

44. An isolated peptide of claim 43 which is at least about 10-20 amino acids in length.

45. An isolated peptide of claim 43 which is at least about 10-16 amino acids in length.

46. A modified peptide having an activity of Der p VII.

47. A modified peptide of claim 46, wherein at least one cysteine residue present in the Der p VII amino acid sequence shown in Figure 3A and 3B (SEQ ID NO: 2) is replaced by another amino acid residue.

48. A modified peptide of claim 46, wherein at least one cysteine residue present in the Der p VII amino acid sequence shown in Figure 3A and 3B (SEQ ID NO: 2) is replaced by a serine residue.

49. A modified peptide of claim 46, wherein at least one lysine residue is added to either the amino or carboxy terminus or both the amino and carboxy terminus of the peptide.

50. A modified peptide of claim 46, wherein at least one charged amino acid is added to either the amino or carboxy terminus or both the amino and carboxy terminus of the peptide.

51. A modified peptide having an activity of Der f VII.

52. A modified peptide of claim 51, wherein at least one cysteine residue present in the Der f VII amino acid sequence shown in Figure 6A and 6B (SEQ ID NO: 7) is replaced by another amino acid residue.

53. A modified peptide of claim 51, wherein at least one cysteine residue present in the Der f VII amino acid sequence shown in Figure 6A and 6B (SEQ ID NO: 7) is replaced by a serine residue.

54. A modified peptide of claim 51 wherein at least one lysine residue is added to either the amino or carboxy terminus or both the amino and carboxy terminus of the peptide.

55. A modified peptide of claim 51, wherein at least one charged amino acid is added to either the amino or carboxy terminus or both the amino and carboxy terminus of the peptide.

56. A substantially pure preparation of a peptide having an activity of a house dust mite allergen, Der p VII.

57. A substantially pure preparation of a peptide having an activity of a house dust mite allergen, Der f VII.

58. A composition suitable for pharmaceutical administration comprising at least one peptide having an activity of Der p VII and a pharmaceutically acceptable carrier.

59. A composition of claim 58, wherein the peptide comprises an amino acid sequence of Figure 3A and 3B (SEQ ID NO: 2).

60. A composition of claim 59, wherein the peptide comprises amino acid residues 1-198 of Figure 3A and 3B (SEQ ID NO: 2).

61. A composition suitable for pharmaceutical administration comprising at least one peptide having an activity of Der f VII and a pharmaceutically acceptable carrier.

62. A composition of claim 61, wherein the peptide comprises an amino acid sequence of Figure 6A and 6B (SEQ ID NO: 7).

63. Use of the composition of claim 58, 59, 60, 61 or 62 for the manufacture of a medicament for treating sensitivity to a house dust mite allergen in a subject.

64. A method of treating sensitivity to a house dust mite allergen in a subject sensitive to the allergen, comprising administering to the subject the composition of claim 58.

65. A method of treating sensitivity to a house dust mite allergen in a subject sensitive to the allergen, comprising administering to the subject the composition of claim 59.

66. A method of detecting sensitivity in a subject to a house dust mite allergen, comprising combining a blood sample obtained from the subject with a peptide of claim 36, under conditions appropriate for binding of blood components with the peptide and determining the extent to which such binding occurs.

67. A method of claim 66, wherein the extent to which binding occurs is determined by assessing T cell function, T cell proliferation, B cell function, binding of the protein to antibodies present in the blood or a combination thereof.

68. A method of treating sensitivity to a house dust mite allergen in a subject sensitive to the allergen, comprising administering to the subject the composition of claim 61.

69. A method of treating sensitivity to a house dust mite allergen in a subject sensitive to the allergen, comprising administering to the subject the composition of claim 62.

70. A method of detecting sensitivity in a subject to a house dust mite allergen, comprising combining a blood sample obtained from the subject with a peptide of claim 41, under conditions appropriate for binding of blood components with the peptide and determining the extent to which such binding occurs.

71. A method of claim 70, wherein the extent to which binding occurs is determined by assessing T cell function, T cell proliferation, B cell function, binding of the protein to antibodies present in the blood or a combination thereof.

72. An antibody specifically reactive with a peptide of claim 36.

73. An antibody of claim 72 which is a monoclonal antibody.

74. An antibody specifically reactive with a peptide of claim 41.

75. An antibody of claim 74 which is a monoclonal antibody.

76. A T cell clone specifically reactive with a peptide of claim 36.

77. A soluble T cell receptor specifically reactive with a peptide of claim 36.

78. A T cell clone specifically reactive with a peptide of claim 41.

79. A soluble T cell receptor specifically reactive with a peptide of claim 41.

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